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STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER
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HSU, JONI

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2628

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/656,110

Applicant(s)

HA, HO-JIN

Examiner

Joni Hsu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments, see page 6, filed June 19, 2007, with respect to the objection to the specification have been fully considered and are persuasive. The objection to the specification has been withdrawn.
2. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.
3. Applicant's arguments, see p. 7-15, filed June 19, 2007, with respect to the rejection(s) of claim(s) 1-15 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Fallon (US006601104B1) and Hirota (US006865431B1).
4. As per Claim 1, Applicant argues that Matsuzaki (US 20030145336A1) teaches DVD outputs video information to video/audio processing unit 202, and does not teach DVD stores video data generated through video/audio processing unit 202, and therefore does not teach that the DVD is a video memory that temporarily stores both video data generated through the video processing part and user data stored in a hard disk (page 7).

In reply, the Examiner agrees. New grounds of rejection are made in view of Fallon, which teaches video memory (1130, Fig. 11) temporarily stores video data generated through video processing part 1120 (c. 15, ll. 46-58). New grounds of rejection are also made in view of Hirota, which teaches memory (3, Fig. 52) temporarily stores user data stored in the hard disk (31; *embodiment describes flash memory card, though the invention can be applied to other media including a hard disk*, c. 56, ll. 10-13; c. 42, ll. 46-56).

Applicant argues that Matsuzaki discloses that video/audio information received from the DVD and processed by the video processing unit 202 is transmitted to a display device 30, but does not teach that the data transmitting part outputs both video data and user data temporarily stored in the video memory through a video connector (page 8).

In reply, the Examiner agrees. New grounds of rejection are made in view of Fallon, which teaches outputting video data temporarily stored in video memory (1130, Fig. 11) to display apparatus (c. 15, ll. 46-58). New grounds of rejection are also made in view of Hirota, which teaches user data temporarily stored in the memory (3, Fig. 52) is output to the display device (5) (c. 41, ll. 32-63; c. 37, ll. 22-28). Since Matsuzaki teaches that the data transmitting part (213, Fig. 3) outputs data to a display device (30, Fig. 2) through a video connector (201) [0035-0037, 0039], the combination of Matsuzaki and Hirota teaches that the data transmitting part outputs user data temporarily stored in the video memory through a video connector.

Applicant argues Matsuzaki does not teach speaker control unit 304 is control part that outputs user data received at computer body through hard disk and user data is output to external apparatus. Speaker 305 is not an external apparatus that is external to display device 30 (p. 8).

In reply, the Examiner has used Hirota to teach outputting user data received at computer body through hard disk (31, Fig. 52; c. 56, ll. 10-13; c. 42, ll. 46-56; c. 41, ll. 32-63; c. 37, ll. 22-28), and Lyle (US007035290B1) is used to teach user data is output to external apparatus (c. 14, ll. 43-c. 15, ll. 6; c. 13, ll. 66-c. 14, ll. 16). The Examiner points out speaker 305 cited in Matsuzaki is external to CRT unit 303 (Fig. 2), and so is considered to be an external apparatus.

Applicant argues Bertram (US005657091A) does not cover the deficiencies (p. 8).

In reply, Examiner states new grounds of rejection are made in view of Fallon.

Applicant argues that Masukura (US006989868B2) teaches user information is used by processing parameter controller 1104 and video data is stored in the converted video data storage device 1105. The user information is not stored in the converted video data storage device 1105 and is not transmitted to a display apparatus. Therefore, Masukura does not teach that the video memory also stores the user data stored in the hard disk (p. 8-10).

In reply, Examiner agrees. New grounds of rejection are made in view of Hirota.

Applicant argues Masukura does not cover deficiencies in Masuzaki and Bertram in that Masukura does not teach display apparatus having data receiving part to receive video and user data provided from computer body and control part to display video data to display part (p. 10).

In reply, the Examiner points out that Masuzaki teaches a display apparatus (30, Fig. 2) including a data receiving part (301) to receive video data provided from a computer body (20) and a control part (302) to display the video data to a display part (303) [0036, 0039]. Hirota and Lyle each teach a data receiving part to receive user data provided from a computer body (c. 41, ll. 32-63; c. 37, ll. 22-28 in Hirota; c. 13, ll. 53-c. 14, ll. 16; c. 14, ll. 43-c. 15, ll. 6 in Lyle).

Applicant argues that in Lyle (US007035290B1), the warning is not received at a display apparatus and then the control part of display apparatus displays video data to a display part and outputs the warning to an external apparatus. The receiver 115 cannot be a display apparatus, a display part and an external apparatus. Therefore, Lyle does not suggest that video data and user data are transmitted through the transmitter 113, nor does Lyle suggest that video data is controlled by a control part to be displayed at a display part and that user data is controlled to be output to an external apparatus. Further, Lyle includes no discussion of a control part that displays video data received through a data receiving part to a display part and that outputs user data to an external apparatus connected to an external apparatus connecting part (p. 10-11).

In reply, Examiner points out Lyle does teach video and user data are transmitted through transmitter 113 (c. 13, ll. 53-c. 14, ll. 16). Lyle is now being used merely to teach user data is output to external apparatus (c. 14, ll. 43-c. 15, ll. 6; c. 13, ll. 66-c. 14, ll. 16). Matsuzaki teaches displaying video data received through data receiving part 301 to display part 303 [0036, 0039].

5. As per Claim 3, Applicant argues that the cited references do not teach that “the TMDS transmitter comprises RGB data output pins, and compresses the user data and the video data provided from the video memory in a predetermined ratio to output a compressed user and video data through the respective RGB data output pins” (p. 12-13).

In reply, the Examiner disagrees. Matsuzaki teaches TMDS transmitter (213, Fig. 3) has RGB data output pins, and compresses video data provided from memory in predetermined ratio to output compressed video data through respective RGB data output pins [0012, 0038, 0043, 0044, 0037]. Fallon teaches video data is provided from video memory (1130, Fig. 11; c. 15, ll. 46-58). Hirota teaches user data is provided from memory (3, Fig. 52; c. 41, ll. 32-63; c. 37, ll. 22-28). Fandrianto (US005982459A) teaches compressing user data and video data (c. 3, ll. 50-52) and outputting compressed user and video data through the respective RGB data output pins (c. 23, ll. 35-60).

6. As per Claim 9, Applicant argues Matsuzaki does not teach both displaying the video data of the transmitted data as a picture and outputting the user data of transmitted data to an external apparatus connected to an external apparatus connecting part. Further, Matsuzaki does not suggest that data that is transmitted to the display apparatus is user data stored in a hard disk and video data generated by a video processing part (page 13).

In reply, the Examiner points out that Matsuzaki is used to teach displaying video data of transmitted data as picture and data that is transmitted to display apparatus is video data

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generated by video processing part 202 [0036, 0044, 0108-0114]. Lyle is used to teach outputting user data of transmitted data to external apparatus connected to external apparatus connecting part (c. 14, ll. 43-c. 15, ll. 6; c. 13, ll. 53-c. 14, ll. 16). New grounds of rejection are made in view of Hirota, which teaches data that is transmitted to display apparatus (5, Fig. 52) is user data stored in hard disk (31; c. 56, ll. 10-13; c. 42, ll. 46-56; c. 41, ll. 32-63; c. 37, ll. 22-28).

7. As per Claim 10, Applicant argues cited references do not teach compressing user data and the video data according to a TMDS-based digital data transmission standard, before transmitting the data from the computer body to the display apparatus (p. 14).

In reply, the Examiner points out that Matsuzaki teaches compressing the video data according to a TMDS-based digital data transmission standard, before transmitting the data from the computer body to the display apparatus [0058, 0087, 0038, 0018]. New grounds of rejection are made in view of Hirota, which teaches transmitting user data from the computer body to the display apparatus (c. 41, ll. 32-63; c. 37, ll. 22-28). Therefore, the device of Matsuzaki can be modified so that user data is also transmitted as suggested by so that the user data is also compressed according to a TMDS-based digital data transmission standard, before transmitting the data from the computer body to the display apparatus.

8. As per Claim 11, Applicant argues that cited references do not teach “extracting the data; and separating an extracted data into the video data and the user data” (p. 14).

In reply, the Examiner disagrees. Johnson (US006593972B1) discloses that the control part comprises a signal separating part to separate digital data extracted in the data receiver into the video data and the user data (c. 7, ll. 18-27).

9. As per Claim 15, Applicant argues Matsuzaki does not suggest that a storage unit stores user data, a data transmitter transmits video data and user data, an external storage unit stores the

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user data, and a display unit which is connected to a processing unit and which is connected to the external storage unit via an external storage unit connector displays the video data and transmits the user data to the external storage unit (p. 15).

In reply, the Examiner points out Matsuzaki teaches storage unit stores user data [0035], data transmitter (213, Fig. 3) transmits video data [0076], and display unit (30, Fig. 2) is connected to processing unit 202 and displays video data [0045-0048]. New grounds of rejection are made in view of Hirota, which teaches storage unit (3, Fig. 52) to store user data (c. 42, ll. 46-56); external storage unit 31 to store user data (c. 9, ll. 46-65). User data is displayed on LCD (5), and the user manipulates this data using the user interface unit (2) (c. 41, ll. 32-64; c. 42, ll. 29-30), and therefore the LCD and the user interface unit are considered to be part of a display unit. The display unit is connected to the processing unit (10), and is connected to the external storage unit (31) via an external storage unit connector (1) (c. 42, ll. 27-42), to display the data (c. 41, ll. 32-64) and to transmit the user data to the external storage unit (31) (c. 9, ll. 61-65).

Applicant argues Masukura does not suggest an external storage unit that stores user data and a display unit which is connected to a processing unit via a video connector and which is connected to the external storage unit via an external storage unit connector displays video data and transmits the user data to the external storage unit (p. 15).

In reply, the Examiner points out that Matsuzaki was used to teach a display unit (303, Fig. 2) which is connected to a processing unit (202) via a video connector (201) displays video data [0035, 0036, 0039]. New grounds of rejection are made in view of Hirota, which teaches an external storage unit (31, Fig. 52) that stores user data and a display unit (5) which is connected to the external storage unit via an external storage unit connector (1) transmits the user data to the external storage unit (c. 42, ll. 27-42, 46-56; c. 9, ll. 46-65; c. 41, ll. 32-64).



***Claim Rejections - 35 USC § 103***

10. The text of those sections of Title 35, U.S. Code 103(a) not included in this action can be found in a prior Office action.

11. Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1) in view of Fallon (US006601104B1), further in view of Hirota (US006865431B1), further in view of Lyle (US007035290B1).

12. As per Claim 1, Matsuzaki teaches computer system having a computer body (20, Fig. 2), having a hard disk to store user data [0035], a video connector (201) to transmit data, a video processing part (202) to generate video data [0044], a data transmitting part (213, Fig. 3) to output the video data through the video connector [0037]; and a display apparatus, comprising a display part (303), a body connection part (301) to connect to the video connector of the computer body, an external apparatus connecting part to connect to an external apparatus (305) [0036], a data receiving part (311, Fig. 3) to receive the video data provided from the computer body through the body connection part [0037, 0073], a control part (302, 304, Fig. 2) to display the video data received through the data receiving part to the display part and to output data to the external apparatus connected to the external apparatus connecting part [0036, 0108-0114].

However, Matsuzaki does not teach video memory to temporarily store video data generated through video processing part, and data transmitting part outputs video data temporarily stored in video memory. However, Fallon discloses video memory (1130, Fig. 11) to temporarily store video data generated through video processing part (1120), and outputting the video data temporarily stored in the video memory to the display apparatus (c. 15, ll. 46-58).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify the device of Matsuzaki to include video memory to temporarily store video

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data generated through video processing part, data transmitting part outputs video data temporarily stored in video memory as suggested by Fallon because Fallon suggests the advantage of higher data transfer rates through intermediate data buffering in random access memory (c. 2, ll. 32-33; c. 15, ll. 28-34, 46-58).

However, Matsuzaki and Fallon do not teach video memory also temporarily stores user data stored in hard disk, data transmitting part also outputs user data temporarily stored in video memory, and the data receiving part also receives the user data provided from the computer body. However, Hirota teaches the memory (3, Fig. 52) temporarily stores user data stored in hard disk (31; *embodiment describes flash memory card, though the invention can be applied to other media including a hard disk*, c. 56, ll. 10-13; c. 42, ll. 46-56), and the user data temporarily stored in the memory (3) is output to the display apparatus (5) (c. 41, ll. 32-63; c. 37, ll. 22-28).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify devices of Matsuzaki and Fallon so video memory also temporarily stores user data stored in hard disk, data transmitting part also outputs the user data temporarily stored in the video memory, and the data receiving part also receives the user data provided from the computer body as suggested by Hirota. Hirota suggests that user data originally stored in the hard disk needs to be transmitted to the display apparatus so that the user is able to view the user data so that the user is able to make modifications to the user data as the user desires (c. 41, ll. 32-63). Memory for temporary storage, such as RAM, has the advantage of being able to be accessed at a high speed, and therefore it is advantageous for the user data to be transferred from the hard disk to this memory so that the user data can be accessed at a high speed (c. 37, ll. 22-28; c. 41, ll. 32-63; c. 56, ll. 10-13; c. 42, ll. 46-56).

However, Matsuzaki, Fallon, and Hirota do not teach user data is output to external apparatus. However, Lyle teaches data transmitting part (113, Fig. 6) and data receiving part 115 to output and receive video and user data (c. 13, ll. 53-c. 14, ll. 16), user data is output to external apparatus (c. 14, ll. 43-c. 15, ll. 6; c. 13, ll. 66-c. 14, ll.16).

It would have been obvious to one of ordinary skill in the art at time of invention by applicant to modify devices of Matsuzaki, Fallon, and Hirota so user data is output to external apparatus as suggested by Lyle because Lyle suggests external apparatuses like portable MP3 players and information kiosks need to receive user data in order for user to be able to use user data to control programs (c. 14, ll. 1-16, 48-52).

13. As per Claim 2, Matsuzaki discloses that the data transmitting part (213, Fig. 3) and the data receiving part (311) respectively comprises a TMDS (Transition Minimized Differential Signals) transmitter and a TMDS receiver to compress/extract data according to a TMDS-based digital data transmission standard [0058, 0087, 0038, 0018].

14. As per Claim 5, Matsuzaki does not teach that the display apparatus has a buffer temporarily storing the user data received through the data receiving part. However, Lyle discloses that the display apparatus has a buffer temporarily storing the user data received through the data receiving part (c. 15, ll. 1-6; c. 13, ll. 66-c. 14, ll. 16).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify device of Matsuzaki so that the display apparatus has a buffer temporarily storing the user data received through the data receiving part as suggested by Lyle because Lyle suggests that the user downloaded data needs to be stored in order for external apparatuses such as portable MP3 players and information kiosks to receive the user data in order for the user to be able to use the user data to control the programs (c. 14, ll. 1-16, 48-52; c. 15, ll. 1-6).

15. As per Claim 6, Matsuzaki does not teach that the external apparatus connecting part outputs a digital signal from the data transmitting part to the external apparatus via the buffer. However, Lyle discloses that the external apparatus connecting part outputs a digital signal from the data transmitting part to the external apparatus via the buffer (c. 15, ll. 1-6; c. 13, ll. 66-c. 14, ll. 16). This would be obvious for the same reasons given in the rejection for Claim 5.

16. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1), Fallon (US006601104B1), Hirota (US006865431B1), and Lyle (US007035290B1) in view of Fandrianto (US005982459A).

Matsuzaki, Fallon, Hirota, and Lyle are relied upon for the teachings for Claim 2. Matsuzaki teaches TMDS transmitter (213, Fig. 3) has RGB data output pins, and compresses video data provided from the memory in a predetermined ratio to output a compressed video data through the respective RGB data output pins [0012, 0038, 0043, 0044, 0037]. Fallon teaches that the video data is provided from a video memory (c. 15, ll. 46-58), as discussed for Claim 1.

However, Matsuzaki and Fallon do not teach user data is compressed and output. However, Fandrianto teaches compressing user and video data (c. 3, ll. 50-52) and outputting compressed user and video data through respective RGB data output pins (c. 23, ll. 35-60).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify the devices of Matsuzaki, Fallon, Hirota, and Lyle so user data is also compressed and output as suggested by Fandrianto because Fandrianto suggests the advantage of compressing all of the data (c. 3, ll. 50-52), which decreases total size of data that needs to be transferred, so increasing the transfer speed.

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17. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1), Fallon (US006601104B1), Hirota (US006865431B1), and Lyle (US007035290B1) in view of Johnson (US006593972B1).

Matsuzaki, Fallon, Hirota, and Lyle are relied upon for the teachings for Claim 2.

However, Matsuzaki, Fallon, Hirota, and Lyle do not teach control part has a signal separating part to separate digital data extracted in data receiver into video data and the user data. However, Johnson teaches that the control part comprises a signal separating part to separate digital data extracted in the data receiver into the video data and the user data (c. 7, ll. 18-27).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Matsuzaki, Fallon, Hirota, and Lyle so control part has signal separating part to separate digital data from receiver into video and user data as suggested by Johnson because Johnson suggests the advantage of being able to send video data to video player device, and user data to user control box, so correct data is sent to correct devices (c. 7, ll. 18-34; c. 3, ll. 51-58).

18. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1), Fallon (US006601104B1), Hirota (US006865431B1), and Lyle (US007035290B1) in view of Charton (US005621792A).

Matsuzaki, Fallon, Hirota, and Lyle are relied upon for the teachings for Claim 1.

However, Matsuzaki, Fallon, Hirota, and Lyle do not teach computer body has a parallel-serial converting part to convert the user data to serial data, wherein the user data is parallel data. However, Charton teaches that the computer body further comprises a parallel-serial converting part to convert the user data to serial data, wherein the user data is parallel data (c. 4, ll. 34-43).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify the devices of Matsuzaki, Fallon, Hirota, and Lyle so computer body has

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parallel-serial converting part to convert user data to serial data, wherein user data is parallel data as suggested by Charton because Charton suggests that transmitting the user data in a serialized format enables an optimal picture access mode (c. 4, ll. 34-43; c. 2, ll. 5-13; c. 18, ll. 52-56).

19. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1), Fallon (US006601104B1), Hirota (US006865431B1), and Lyle (US007035290B1) in view of Charton (US005621792A), further in view of Kato (US006939177B2).

Matsuzaki, Fallon, Hirota, and Lyle are relied upon for the teachings as discussed above relative to Claim 2. Hirota teaches outputting the user data stored in the hard disk to the display apparatus, as discussed in the rejection for Claim 1.

However, Matsuzaki, Fallon, Hirota, and Lyle do not teach that the computer body has a parallel-serial converting part to convert the user data to serial data, wherein the parallel-serial converting part outputs a converted serial data. However, Charton discloses computer body has parallel-serial converting part to convert user data to serial data, wherein the parallel-serial converting part outputs a converted serial data (c. 4, ll. 34-43). This would be obvious for the same reasons given in the rejection for Claim 7.

However, Matsuzaki, Fallon, Hirota, Lyle, and Charton do not teach serial data output to display apparatus through predetermined pin of video connector. However, Kato teaches serial data is output to display apparatus through predetermined pin of video connector (c. 1, ll. 27-38).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify devices of Matsuzaki, Fallon, Hirota, Lyle, and Charton so that the serial data is output to the display apparatus through a predetermined pin of the video connector as

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suggested by Kato because Kato suggests that the data needs to be connected to the right type of pin in order to be transmitted properly (c. 1, ll. 27-38).

20. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1) in view of Lyle (US007035290B1), further in view of Hirota (US006865431B1).

21. As per Claim 9, Matsuzaki teaches data transmitting method of computer system including computer body (20, Fig. 2) having hard disk to store user data [0035], video processing part (202) to generate video data, and video connector (201) through which generated video data is outputted [0044]; and display apparatus having body connection part (301) to be connected to video connector, comprising providing external apparatus connect part in display apparatus [0036]; transmitting data to display apparatus through video connector [0037, 0073]; and displaying video data of transmitted data as picture and outputting data of transmitted data to an external apparatus (305) connected to the external apparatus connecting part [0036, 0108-0114].

However, Matsuzaki does not teach outputting the user data of the transmitted data to the external apparatus connected to the external apparatus connecting part. However, Lyle discloses outputting the user data of the transmitted data to the external apparatus connected to the external apparatus connecting part (c. 14, ll. 43-c. 15, ll. 6; c. 13, ll. 53-c. 14, ll. 16). This would be obvious for the same reasons given in the rejection for Claim 1.

However, Matsuzaki and Lyle do not teach that user data stored on the hard disk is transmitted to the display apparatus. However, Hirota teaches this, as discussed for Claim 1.

22. As per Claim 10, it is similar to Claim 2, and so is rejected under same rationale.

23. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1), Lyle (US007035290B1), and Hirota (US00685431B1) in view of Johnson (US006593972B1).

Claim 11 is similar in scope to Claim 4, and so is rejected under same rationale.

24. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1), Lyle (US007035290B1), and Hirota (US00685431B1) in view of Charton (US005621792A), further in view of Kato (US006939177B2).

Matsuzaki, Lyle, and Hirota are relied upon for teachings discussed relative to Claim 9.

However, Matsuzaki, Lyle, and Hirota do not teach converting the user data to serial data. However, Charton discloses this, as discussed in the rejection for Claim 7.

However, Matsuzaki, Lyle, Hirota, and Charton do not teach setting up predetermined pin of video connector as data transmission pin; wherein transmitting of data comprises outputting serial data to display apparatus through data transmission pin. However, Kato teaches setting up a predetermined pin of the video connector as a data transmission pin; and the user data is serial data, wherein the transmitting of the data comprises outputting the serial data to the display apparatus through the data transmission pin (c. 1, ll. 27-38). This would be obvious for the same reasons given in the rejection for Claim 8.

25. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1), Lyle (US007035290B1), and Hirota (US00685431B1) in view of Charton (US005621792A).

Matsuzaki, Lyle, and Hirota are relied upon for the teachings relative to Claim 9.

However, Matsuzaki, Lyle, and Hirota do not teach converting user data to serial data, wherein data that is transmitted is serial data. However, Charton teaches converting user data to



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serial data, wherein data that is transmitted is the video data and the serial data (c. 4, ll. 34-43; c. 5, ll. 41-45). This would be obvious for the same reasons given in the rejection for Claim 7.

26. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki (US 20030145336A1) in view of Hirota (US00685431B1).

Matsuzaki discloses computer system, comprising a processing unit (20, Fig. 2), comprising a video processor (202) to generate video data [0035, 0044], a storage unit to store user data [0035], and a data transmitter (213, Fig. 3) to transmit the video data [0076]; and a display unit (30, Fig. 2), which is connected to the processing unit via a video connector (201) to display the video data [0045-0048].

However, Matsuzaki does not teach an external storage unit to store the user data; and that the display unit is connected to the external storage unit via an external storage unit connector, to transmit the user data to the external storage unit. However, Hirota discloses a storage unit (3, Fig. 52) to store user data (c. 42, ll. 46-56); an external storage unit (31) to store the user data (c. 9, ll. 46-65). User data is displayed on the LCD (5), and the user manipulates this data using the user interface unit (2) (c. 41, ll. 32-64; c. 42, ll. 29-30), and therefore the LCD and the user interface unit are considered to be part of a display unit. The display unit is connected to the processing unit (10), and is connected to the external storage unit (31) via an external storage unit connector (1) (c. 42, ll. 27-42), to display the data (c. 41, ll. 32-64) and to transmit the user data to the external storage unit (31) (c. 9, ll. 61-65).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify the device of Matsuzaki to include an external storage unit to store the user data; and that the display unit is connected to the external storage unit via an external storage unit connector, to transmit the user data to the external storage unit as suggested by Hirota.

Hirota suggests that using an external storage unit to store user data is advantageous because it is portable and user data can easily be used by different users (c. 1, ll. 25-47). It is advantageous to be able to connect the external storage unit to a display unit so that the user can view the user data and manipulate the user data on the external storage unit (c. 41, ll. 32-64; c. 9, ll. 61-65).

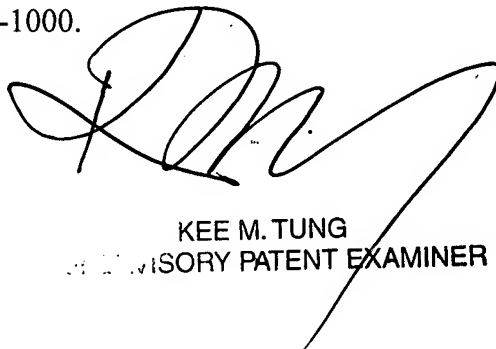
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joni Hsu whose telephone number is 571-272-7785. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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JH



KEE M. TUNG  
SUPERVISORY PATENT EXAMINER